

What is claimed is:

1. A specimen collection apparatus, comprising:
a collapsible specimen retrieval bag having an open end which can be cinched shut to contain a specimen therein;
a housing for holding the specimen retrieval bag in a collapsed state;
a mechanism for deploying the specimen retrieval bag from the housing; and
a mechanism for shaping the open end of the specimen retrieval bag, after the specimen retrieval bag is deployed from the housing, to form an aperture large enough to receive the specimen into the specimen retrieval bag;
wherein the mechanism for shaping the open end of the specimen retrieval bag includes at least one substantially gas-tight duct associated with the specimen retrieval bag, which duct is disposed at a position selected from the group of: (a) on an inside surface of the specimen retrieval bag; (b) on an outside surface of the specimen retrieval bag; and (c) between the inside surface of the specimen retrieval bag and the outside surface of the specimen retrieval bag.
2. The apparatus of claim 1, wherein the duct is disposed adjacent the open end of the specimen retrieval bag.
3. The apparatus of claim 2, wherein the duct forms a generally circular ring when gas pressure in the duct is greater than gas pressure outside the duct.
4. The apparatus of claim 3, further comprising a mechanism for supplying gas to the duct in order to inflate the duct.
5. The apparatus of claim 4, wherein the mechanism for supplying the gas to the duct is adapted to provide incremental inflation of the duct.
6. The apparatus of claim 5, wherein the mechanism for supplying the gas to the duct is selected from the group of: (a) an electrical pump; (b) a hand-operated pump; (c) a container of compressed gas; and (d) a source within an operating room.
7. The apparatus of claim 6, wherein the hand operated pump is selected from the group of: (a) a bulb-type pump; and (b) a syringe.

8. The apparatus of claim 3, further comprising a mechanism for permitting gas pressure in the duct to be reduced in order to deflate the duct.

9. The apparatus of claim 8, wherein the mechanism for permitting gas pressure in the duct to be reduced is adapted to provide incremental deflation of the duct.

10. The apparatus of claim 9, wherein the mechanism for permitting gas pressure in the duct to be reduced comprises a valve.

11. The apparatus of claim 3, further comprising a mechanism for deflating the duct by decreasing gas pressure therein.

12. The apparatus of claim 11, wherein the mechanism for deflating the duct comprises a mechanism for pumping gas out of the duct.

13. The apparatus of claim 12, wherein the mechanism for pumping gas out of the duct is adapted to provide incremental deflation of the duct.

14. The apparatus of claim 13, wherein the mechanism for pumping gas out of the duct is selected from the group of: (a) an electrical pump; (b) a hand-operated pump; and (c) a source within an operating room.

15. The apparatus of claim 14, wherein the hand-operated pump is selected from the group of: (a) a bulb-type pump; and (b) a syringe.

16. The apparatus of claim 1, wherein the gas is air.

17. The apparatus of claim 1, further comprising a mechanism for cinching shut the open end of the specimen retrieval bag.

18. The apparatus of claim 17, wherein the mechanism for cinching shut the open end of the specimen retrieval bag includes a string running at least partially through the duct, which string may be pulled to cinch shut the open end of the specimen retrieval bag.

19. The apparatus of claim 1, wherein the housing comprises a first elongated tube with two ends.

20. The apparatus of claim 19, wherein the mechanism for deploying the specimen retrieval bag comprises a second elongated tube with an outside diameter smaller than an inside diameter of the first elongated tube, wherein the second elongated tube is configured to push the specimen retrieval bag out of one of the ends of the first elongated tube.

21. The apparatus of claim 1, further comprising a knife disposed on the housing.

22. The apparatus of claim 21, wherein the knife is disposed on an end of the housing opposite that from which the specimen retrieval bag is deployed.

23. A specimen collection apparatus, comprising:

a collapsible specimen retrieval bag having an open end which can be cinched shut to contain a specimen therein;

a housing for holding the specimen retrieval bag in a collapsed state, which housing comprises a first elongated tube with two ends;

a mechanism for deploying the specimen retrieval bag from the housing, which mechanism for deploying the specimen retrieval bag from the housing comprises a second elongated tube with an outside diameter smaller than an inside diameter of the first elongated tube, wherein the second elongated tube is configured to push the specimen retrieval bag out of one of the ends of the first elongated tube;

a substantially gas-tight duct associated with the specimen retrieval bag for shaping the open end of the specimen retrieval bag, after the specimen retrieval bag is deployed from the housing, to form an aperture large enough to receive the specimen into the specimen retrieval bag;

a mechanism for inflating the duct by supplying gas to the duct;

a mechanism for deflating the duct by permitting gas pressure in the duct to be reduced; and

a mechanism for cinching shut the open end of the specimen retrieval bag;

wherein the duct is disposed at a position selected from the group of: (a) on an inside surface of the specimen retrieval bag; (b) an outside surface of the specimen retrieval bag; and (c) between the inside surface of the specimen retrieval bag and the outside surface of the specimen retrieval bag;

wherein the duct is disposed adjacent the open end of the specimen retrieval bag; and

wherein the duct forms a generally circular ring when gas pressure in the duct is greater than gas pressure outside the duct.

24. The apparatus of claim 23, wherein the mechanism for cinching shut the open end of the specimen retrieval bag includes a string running at least partially through the duct, which string may be pulled to cinch shut the open end of the specimen retrieval bag.

25. The apparatus of claim 24, wherein: (a) the string runs through the first elongated tube and the second elongated tube; and (b) gas is supplied to the duct through the first elongated tube and the second elongated tube.

26. The apparatus of claim 25, further comprising a mechanism for pumping gas out of the duct.

27. The apparatus of claim 26, wherein gas is pumped out of the duct through the first elongated tube and the second elongated tube.

28. The apparatus of claim 24, further comprising a stem in fluid communication with the duct, wherein gas passes through the stem during inflation and deflation.

29. The apparatus of claim 28, wherein the string runs through the stem.

30. The apparatus of claim 29, wherein the stem is attached to the specimen retrieval bag at a reinforced portion of the specimen retrieval bag.

31. The apparatus of claim 24, wherein the mechanism for deflating the duct by permitting gas pressure in the duct to be reduced comprises a valve having a gas blocking element seatable in an interference fit with a seating surface.

32. The apparatus of claim 31, wherein the valve is operatively connected to the string such that the valve permits gas pressure in the duct to be reduced after the string is pulled.

33. The apparatus of claim 24, further comprising a backflow prevention mechanism operatively connected to the string for substantially prohibiting a flow of gas back into the duct after the string is pulled past a predetermined position during the cinching shut of the open end of the specimen retrieval bag.

34. The apparatus of claim 33, wherein the backflow prevention mechanism comprises a valve having a gas blocking element seatable in an interference fit with a seating surface.

35. The apparatus of claim 23, further comprising a mechanism for unfurling the specimen retrieval bag, after the specimen retrieval bag is deployed from the housing.

36. The apparatus of claim 35, wherein the mechanism for unfurling the specimen retrieval bag comprises at least one vein extending from the duct, which vein is in fluid communication with the duct.

37. The apparatus of claim 36, wherein the vein extends generally away from the open end of the specimen retrieval bag and towards a closed end of the specimen retrieval bag.